

旧大陆的绢蒿属植物

林有润

THE OLD WORLD SERIPHIDIUM (BESS.)

POLJAK. (COMPOSITAE)

Ling Yeou-ruenn

〔提 要〕 本文报导了亚、欧、非三洲的绢蒿属 [*Seriphidium* (Bess.) Poljak.] 植物的系统分类、分布及区系地理等。在系统分类与分布项中, 作者结合现代孢粉的研究, 比较了该属与邻近属, 如蒿属 (*Artemisia* Linn.)、素蒿属 (*Elacanthemum* Y. Ling & Y. R. Ling) 及百花蒿属 (*Stilpnopsis* Krasch.) 的异同, 该属分组特点及经订正与考证过的该属107种、27变种及补遗10种的正名、异名及其分布地区等; 在区系地理项中作者讨论了该属起源中心、现代分布中心, 同时将亚、欧、非三洲绢蒿属区系分5亚区、8地区成分加以论述。

Introduction

Seriphidium (Bess.) Poljak. is a transitional genus from the Sect. *Seriphidium* Bess. of *Artemisia* Linn. in 1961. It's different from *Artemisia* Linn., sensu stricto, except Sect. *Seriphidium* Bess., by that, the capitula sessile, ovoid or ellipsoid with all hermaphrodite 2—10 florets and disposed in paniculate inflorescences or in compound capitula. Corolla tubular, 5-toothed at apex. Syngenesious stamen with lanceolate or linear appendix at apex for each anther and acute or obtuse at base of it. All florets fertile, but most species are self-pollination, style length usually shorter or as long as that of corolla, bilateral, but unforked. Involucre-bracts 4—7 series,

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imbricate. herbaceous with membranaceous margin and green costa. Achenes obovoid or ovoid, slightly flattened and striated.

Perennial or annual herbs or subshrubs. Stem erect, ribbed. Branches, leaves and involucre-bracts usually covered with tomentose or arachnoid tomentose hairs for ever or in the earlier only. Leaves alternate, 1—3 pinnately sectioned, segments linear, filiform or pectinate, or 1—2 palmately sectioned, segments linear.

More than 130 species in the world, but 107 species and 27 varieties in the Old World.

Some species, which contain α - or β -santonin, in the genus used for the manufacture of anthelmintics to kill the ascarids well, and a few for the herbage to feed livestock at pastoral area.

Compared *Seriphidium* (Bess.) Poljak. with other allies, especially *Stilpnolepis* Krasch. and *Elachanthemum* Y. Ling & Y. R. Ling as well as *Artemisia* Linn., sensu striato, in the Trib. *Anthemideae* of *Compositae*. Authors recommend, although the former 3 genera, except *Artemisia* Linn., which contains heterogamous florets in capitula, are all with hermaphrodite florets in capitula, both *Stilpnolepis* Krasch. and *Elachanthemum* Y. Ling & Y. R. Ling are with bigger, hemispherical or spherical capitula and each of which contains more than 80—100 or more florets, and some florets in the centre of it usually haven't matured before cessation of flowering. That's shown the primitive evidence just like the primitive species in Sect. *Absinthium* Bess. of *Artemisia* Linn. or even in other primitive genera in Trib. *Anthemideae*. Besides, those long peduncled at base of capitula and with triangular appendix at anther-tip etc. All above mentioned characterizations have also been found in more primitive genera, as in *Matricaria* Linn. or *Tanacetum* Linn. and *Chrysanthemum* Bip.-Ship. in Trib. *Anthemideae*. In addition, in *Stilpnolepis* Krasch. it with all membranaceous involucre-bracts, corolla campanulate and achenes long-oblong or clavate, which differ from that with herbaceous bracts and membranaceous margin only, tubular corolla and oblique obovoid achenes in *Elachanthemum* Y. Ling & Y. R. Ling.

Pollen grains have shown the differentiation for them even if the evidence of all above genera are 3-colporate. *Seriphidium* (Bess.) Poljak. is with advanced indistinctive 3 layers and minute columnar sculptures. But it's more primitive and similar to *Matricaria* Linn. with 3 distinct thin layers,

densely minute spinulose extine and the reticulate columellae in *Elachanthemum* Y. Ling & Y. R. Ling or spiny extine in *Stilpnolepis* Krasch. or minute spinulose, but granulate sculpture and reticulate columellae in *Artemisia* Linn. As the result of that, author supports the idea, that *Seriphidium* (Bess.) Poljak. is one of more advanced representation in Trib. Anthemideae of Compositae.

The Classification and Distribution of *Seriphidium* (Bess.) Poljak. in the Old World.

Seriphidium (Bess.) Poljak.

Poljak. in Mat. Fl. Veg. Kasachg. 11 : 171. 1961; Y. R. Ling in Bull. Bot. Res. 2(2) : 9. 1982 & 8(3) : 111. 1988. — *Artemisia*, Sect. *Seriphidium* Bess. in Bull. Soc. Nat. Mosc. 1 : 222. 1829. — Subgen. *Seriphida* Less. Syn. Gen. Comp. 264. 1832 (*Seriphidia*). — Subgen. *Seriphidium* (Bess.) Peterm. Deutschl. Fl. 294. 1848.

Sect. 1. *Seriphidium*

Leaves 1—3 pinnately sectioned, segments linear or filiform. Capitula in paniculate inflorescences or in compound capitula.

105 species and 26 varieties in the Old World. Distribute mainly in N.-W., W. & N. China and C. & W. USSR, and a few in the countries of S.-W., N. & W. Asia, Europe and N., N.-W. & N.-E. Africa, as well as N. America.

Ser. 1. *Seriphidium* — *Artemisia*, Ser. *Maritimae* Poljak. Fl. URSS 26 : 573. 1961.

1. *Seriphidium schrenkianum* (Ledeb.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 172. 1961. — *Artemisia schrenkiana* Ledeb. Fl. Ross. 2(2) : 575. 1844-46. — *A. albida* auct., non Spreng. : Ledeb. Fl. Alt. 4 : 85. 1833. p. p. — *A. maritima* auct., non Linn., Ledeb. 1. c. 4 : 85. 1833.

var. 1. *schrenkianum*

China (Xinjiang), Mongolia, USSR (C. Asia).

var. 2. **compressum** (Filat.) Y. R. Ling comb. nov. — *Artemisia schrenkiana* Ledeb. ssp. *compressa* Filat. Fl. Kaschg. 9:127. 1966.

China (Xinjiang), Mongolia, USSR (C. Asia).

2. **Seriphidium santonicum** (Linn.) Bremer & Humphries comb. nov. — *Artemisia santonicum* Linn. Sp. Pl. 845. 1753. — *A. monogyna* auct. non Waldst. & Kit.: MB. Fl. Taur.-Cauc. 2:293. 1808. — *A. maritima* Linn. var. *wilhelmsiana* Bess. var. *blumiana* Bess., var. *boschniakiana* Bess., var. *kitaibeliana* Bess., var. *hablitziana* Bess. and var. *marschalliana* Bess. in Bull. Soc. Nat. Mosc. 7:32-43. 1834. — *A. boschniakiana* (Bess.) DC. Prodr. 6:104. 1837. — *A. maritima* Linn. var. *monogyna* Ledeb. Fl. Ross. 2(2):573. 1845, non Waldst. & Kit. — *A. maritima* Linn. var. *deserticola* Janka in Linnaea 30:578. 1859. — *A. maritima* Linn. var. *nulans* Schmalh. & var. *fragrans* Ledeb. f. *monogyna* Schmalh. Fl. C.-S. Ross. 2:74. 1897. — *A. salina* auct., non Willd.: Kell. in Semidesert reg. URSS 2:109-111. 1907. — *A. salina* Willd. ssp. *monogyna* Sagors. in Oest. Bot. Seitschr. 16. 1907., incl. var. *kitaibelii* Sagors. in Mitt. Thur. Bot. Ver. Neu. Folge, 23:82. 1908. — *A. maritima* Linn. ssp. *monogyna* (Waldst. & Kit.) Hegi, Fl. Mitt.-Europ. 2(2):664. 1929. — *A. maritima* Linn. ssp. *salina* (Kell.) Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2):268. 1930. — *A. stepposa* Kell. l. c. 6:355. 1936. — *A. praticola* Klok. Fl. RSS Ucr. 11:345, 557. 1962. — *A. pseudofragrans* Klok. l. c. 11:345, 557. 1962. — *A. kumykorum* Minat. in Bot. Mag. Ucr. RSS 27(3):32. 1965.

var. 1. **santonicum**

Iran, Afghanistan, Turkey, USSR (C. & W.), Czechoslovakia, Hungary, Austria, Romania, Bulgaria, Yugoslavia, Greece.

var. 2. **patens** (Neilr.) Y. R. Ling comb. nov. — *Artemisia santonicum* Linn. ssp. *patens* (Neilr.) K. Pers. Op. Bot. (Lund) 35:162. 1974.

(*1)

(*1). also syn. *Artemisia maritima* Linn. var. *patens* Neilr.

W. Romania, E. Austria.

3. *Seriphidium transiliense* (Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. — *Artemisia transiliensis* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 417. 1954.

China (Xinjiang), USSR (C. Asia).

4. *Seriphidium nitrosum* (Web. ex Stechm.) Poljak. in Mat. Fl. Veg. Kaschg. 11. 172. 1961. — *Artemisia nitrosa* Web. ex Stechm. Dissert. Artem. 24. 1775. — *A. maritima* Linn. var. *gmeliniana* Bess. in Bull. Soc. Nat. Mosc. 7: 38. 1834. — *A. lercheana* auct., non Web., ex Stechm.: Ledeb. Fl. Alt. 4: 84. 1834, quoad pl. Tschujiens. — *A. lercheana* Web. ex Stechm. var. *humilis* DC. Prodr. 6: 104. 1834, excl. syn. — *A. maritima* Linn. var. *lercheana* Bess. f. *gmeliniana* (Bess.) Ledeb. Fl. Ross. 2(2): 573. 1844–46, quoad pl. Gmel. — *A. maritima* Linn. var. *genuina* Ledeb. f. *suberecta* Ledeb. l. c. 2(2): 572. 1844–46, quoad pl. Sibir. — *A. maritima* Linn. var. *lercheana* Bess. f. *humilis* Ledeb. l. c. 2(2): 572. 1844–46. — *A. maritima* Bess. var. *lercheana* Bess. f. *dahurica* Turcz. Fl. Baic.-Dahur. 3: 56. 1856. — *A. maritima* Linn. var. *genuina* Kryl. Fl. Alt. 3: 639. 1904. — *A. maritima* Linn. ssp. *incana* (Kell.) Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2): 268. 1930. — *A. maritima* Linn. ssp. *gmeliniana* (Bess.) Krasch. in Catal. Pl. Herb. URSS 10: 99. 1936. — *A. schischkinii* Krasch. in Animadv. Syst. Herb. Univ. Tomsk. 1-2: 2. 1949.

var. 1. *nitrosum*

China (Xinjiang), Mongolia, USSR (C. Asia).

var. 2. *subglabrum* (Krasch.) Y. R. Ling comb. nov. — *Artemisia nitrosa* Web. ex Stechm. var. *subglabra* Krasch. ex Poljak. Fl. URSS 26: 580. 1961.

China (Xinjiang), Mongolia, USSR (C. Asia).

var. 3. *kasakorum* (Krasch.) Y. R. Ling comb. nov. — *Artemisia nitrosa* Web. ex Stechm. ssp. *kasakorum* Krasch. Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2): 271. 1930. — *A. kasakorum* (Krasch.) Pavl. Fl. Centr. Kasakhst. 3: 274. 1938. — *A. maritima* Linn. ssp. *kasakorum* (Kra-

sch.) Botsch. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 19:626. 1959, non Krasch.

USSR (C. Asia).

var. 4. **gobicum** (Krasch.) Y. R. Ling in Bull. Bot. Res. 8(3):114. 1988. — *Artemisia mongolorum* Krasch. ssp. *gobica* Krasch. in Rep. Cyto. 2782. 1949. — *A. gobica* (Krasch.) Grub. Conspect. Fl. Mong. 265. 1955. — *A. nitrosa* Web. ex Stechm. var. *gobica* (Krasch.) Poljak. Fl. URSS 26: 580. 1961.

China (Xinjiang), Mongolia, USSR (C. Asia).

5. **Seriphidium saissanicum** (Krasch.) Bremer & Humphries comb. nov. — *Artemisia saissanica* (Krasch.) Filat. in Not. Inst. Bot. Acad. Sci. Kaschg. RSS 15:234. 1963. — *A. mongolorum* Krasch. ssp. *saissanica* Krasch. in Kryl. Fl. Sibir. Occ. 11:2783. 1949.

USSR (C. Asia).

6. **Seriphidium finitum** (Kitag.) Ling & Y. R. Ling in Act. Phytotax. Sin. 18(4):513. 1980. — *Artemisia finita* Kitag. in Rep. Inst. Sci. Res. Manch. 4:124, pl. 3-2. 1942. — *A. maritima* auct. non Linn.: Kitag. Lineam. Fl. Mansh. 428. 1939.

China (Nei Monggol).

7. **Seriphidium mongolorum** (Krasch.) Ling & Y. R. Ling in Bull. Bot. Res. 8(3):115. 1988. — *Artemisia mongolorum* Krasch. in Act. Inst. Bot. Acad. Sci. URSS 1(3):350. 1936. — *A. nitrosa* auct., non Web. ex Stechm.: Poljak. Fl. URSS 26:580. 1961. p. p., quoad syn. *A. mongolorum* Krasch.

China (N.-W.).

8. **Seriphidium karatavicum** (Krasch. & Abol. ex Poljak.) Ling & Y. R. Ling in Bull. Bot. Res. 8(3):115. 1988. — *Artemisia karatavica* Krasch. & Abol. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16:397.

1954.—*A. tenuisecta* Nevski var. *karataviensis* Poljak. Fl. URSS 26 : 598.
1961.

China (N.-W.), USSR (C. Asia).

9. ***Seriphidium assurgens*** (Filat.) Bremer & Humphries comb. nov.—*Artemisia assurgens* Filat. in Nov. Syst. Pl. Vasc. 19 : 178. 1982.

W. Mongolia.

10. ***Seriphidium maritimum*** (Linn.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 172. 1961.—*Artemisia maritima* Linn. Sp. Pl. 846. 1759.—*A. gallica* Willd. Sp. Pl. 3 : 1834. 1800.—*A. maritima* Linn. var. *linnaeana* Bess. in Bull. Soc. Nat. Mosc. 7 : 33. 1834.—*A. maritima* Linn. var. *genuina* Ledeb. Fl. Ross. 2(2) : 571. 1844-46. p. p., excl. pl. Taur.—*A. maritima* Linn. ssp. *maritima* (Linn.) Gams. ex Hegi, Ill. Fl. Mitt.-Europ. 2(2) : 662. 1929. (*2)

(*2). also syn. *Artemisia maritima* Linn. var. *suffruticosa* Ven.

var. 1. ***maritimum***

USSR (W.), Sweden, Norway, Poland, Denmark, United Kingdom, Ireland, Czechoslovakia, Romania, Germany, Hungary, Luxemburg, Netherlands, France, Belgium, Bulgaria.

var. 2. ***palmatum*** (Lam.) Y. R. Ling comb. nov.—*Artemisia palmata* Lam. Encycl. Meth. 1 : 268. 1783.

USSR (W.).

var. 3. ***salinum*** (Willd.) Y. R. Ling comb. nov.—*Artemisia salinum* Willd. l. c. 3 : 1834. 1800.—*A. maritima* Linn. var. *salina* Kell. in Semidesert reg. URSS 104-109. 1907.

USSR (W.), E. & S. Europe (same to var. 1.).

var. 4. ***humifusum*** (Fries ex Hart.) Y. R. Ling comb. nov.—*Artemisia maritima* Linn. ssp. *humifusa* (Fries ex Hart.) K. Pers. in Op. Bot. (Lund)

3 : 150. 1974. (*3)

(*3). also syn. *Artemisia maritima* Linn. var. *humifusa* Fries ex Hart.

Sweden (Baltic Islands), USSR (Saaremaa Island).

11. ***Seriphidium sawanense*** Y. R. Ling & C. J. Humphries in Bull. Bot. Res. 10(1) : 107. fig. 1. 1990.

China (E. Xinjiang).

12. ***Seriphidium nutans*** (Willd.) Bremer & Humphries comb. nov. — *Artemisia nutans* Willd. Sp. Pl. 3 : 1831. 1800. — *A. cretacea* Kotov in Fl. RSS Ucr. 11 : 347, 571. 1962.

USSR (W.).

13. ***Seriphidium valesianum*** (Lam.) Y. R. Ling comb. nov. — *Artemisia valesiana* Lam. Encycl. Meth. 1 : 269. 1783. — *A. filaginoidea* Web. ex Stechm. Dissect. Artem. 29. 1775. (*4)

(*4). also syn. *Artemisia maritima* Linn. ssp. *valesiana* Krasch. — *A. jaggiiana* Wulf.

S.-W. Switzerland, E. France, N.-W. Italy, Austria.

14. ***Seriphidium szowitzianum*** (Bess.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 172. 1961. — *Artemisia maritima* Linn. var. *wilhelmsiana* Bess., var. *szowitziana* Bess., var. *hablitziana* Bess. & var. *hanseniana* Bess. in Bull. Soc. Nat. Mosc. 7 : 34. 1834. p. p. — *A. szowitziana* (Bess.) Grossh. Fl. Caucas. 4 : 142. 1934. — *A. hanseniana* Grossh. l. c. 4 : 143. 1934. p. p. — *A. prilipkoana* Rzazad. Not. Acad. Sci. Azerb. SSR 3 : 26. 1955. p. p. — *A. nashischevanica* Rzazad. l. c. 3 : 27. 1955. p. p. — *A. iskenderiana* Rzazad. l. c. 3 : 27. 1955. p. p.

USSR (Caucasus).

15. ***Seriphidium fragrans*** (Willd.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia fragrans* Willd. Sp. Pl. 3 : 1835. 1800. — *A. maritima* Linn. var. *fragrans* Ledeb. Fl. Ross. 2(2) : 570. 1844-46. — *A. maritima* Linn. var. *willdenoviana* Bess. & var. *meyeriana* Bess. in Bull. Soc. Nat.

Mosc. 7 : 31, 39. 1834. p. p. — *A. iskenderiana* Rzazad. in Not. Acad. Sci. Azerb. SSR 3 : 24. 1955. — *A. fedorovii* Rzazad. l. c. 3 : 24. 1955. p. p. — *A. nachitschevanica* Rzazad. l. c. 3 : 27. 1955. p. p. — *A. santonica* auct. non Linn. : Davis, Fl. Turk. 5 : 322. 1975.

var. 1. fragrans

Iran, USSR (S.-W.).

var. 2. erivanicum (Bess.) Y. R. Ling comb. nov. — *Artemisia maritima* Linn. var. *erivanica* Bess. in Bull. Soc. Nat. Mosc. 7 : 44. 1834. — *A. taurica* Willd. var. *erivanica* DC. Prodr. 6 : 104. 1837. — *A. fragrans* Willd. var. *erivanica* Poljak. Fl. URSS 26 : 577. 1961, pro syn. — *A. erivanica* Grossh. Fl. Caucas. 4 : 143. 1934.

USSR (Caucasus).

var. 3. phyllostachys (Boiss.) Y. R. Ling comb. nov. — *Artemisia fragrans* Willd. var. *phyllostachys* Boiss. Fl. or. 3 : 366. 1875. — *A. maritima* Linn. var. *hanseniana* Bess. l. c. 7 : 44. 1834. p. p. — *A. taurica* Willd. var. *hanseniana* DC. l. c. 6 : 104. 1837. — *A. hanseniana* Grossh. var. *phyllostachys* (Boiss.) Grossh. & var. *divaricata* Grassh. l. c. 4 : 146. 1934. — *A. phyllostachys* (Boiss.) Woron. ex Poljak. Fl. URSS 26 : 576. 1961, pro syn.

USSR (Caucasus).

16. Seriphidium gurganicum (Krasch.) Bremer & Humphries comb. nov. — *Artemisia fragrans* Willd. ssp. *gurganica* Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2) : 245. 1930. — *A. fragrans* Willd. var. *gurganica* (Krasch.) Poljak. Fl. URSS 26 : 577. 1961. — *A. gurganica* (Krasch.) Filat. in Not. Syst. Herb. Inst. Bot. Acad. Sci. Kaschg. 3 : 39. 1965.

USSR (Turkm.).

17. Seriphidium kurramense (Qazilb.) Y. R. Ling comb. nov. — *Artemisia kurramensis* Qazilb. in Quart. Journ. Pharm., & Pharmacol. 21(3) : 330.

1948.

Afghanistan.

18. *Seriphidium dzevanovskyi* (Leonova) Bremer & Humphries comb. nov.
—*Artemisia dzevanovskyi* Leonova in Vulf, Fl. Krym. 3(3) : 222. 1969. —
A. lerceana auct., non Web. ex Stechm. : Filat. in Nov. Syst. Pl. Vasc.
21 : 168. 1984. p. p., quoad pl. Krym.

USSR (Krym.).

19. *Seriphidium tauricum* (Willd.) Poljak. in Mat. Fl. Veg. Kaschg. 11 :
173. 1961. — *Artemisia taurica* Willd. Sp. Pl. 3 : 1837. 1800. — *A. maritima*
Linn. var. *marschalliana* Bess. in Bull. Soc. Nat. Mosc. 7 : 43. 1834. — *A.*
taurica Willd. var. *marschalliana* (Bess.) DC. Prodr. 6 : 104. 1837. — *A.*
maritima Linn. var. *taurica* Ledeb. Fl. Ross. 2(2) : 574. 1844-46. p. p.
— *A. fragrans* auct., non Willd. : Boiss. Fl. Or. 3 : 366. 1875. p. p. — *A.*
maritima Linn. var. *fragrans* Ledeb. f. *taurica* (Willd.) Schmalh. Fl. C.-S.
Rus. 2 : 74. 1897. (*5) — *A. caspia* Kell. in Fl. S.-E. Europ. reg. USSR
6 : 356. 1936. p. p. — *A. graveolens* Minut. in Bot. Mag. Ucr. SSR 22(3) :
30. 1965.

(*5). also syn. *Artemisia fragrans* Willd. var. *taurica* Zelen.

USSR (W.).

20. *Seriphidium lerceanum* (Web. ex Stechm.) Poljak. in Mat. Fl. Veg.
Kaschg. 11 : 172. 1961. — *Artemisia lerceana* Web. ex Stechm. Dissert.
Artem. 24. 1775, excl. f. — *A. humilis* MB. Casp. 83, 210. 1801.
— *A. maritima* Linn. var. *lerceana* Bess. & var. *rossica* Bess. in Bull. Soc.
Bot. Mosc. 7 : 37-38. 1834. p. p. — *A. maritima* Linn. var. *incana* Kell.
in Semidesert reg. URSS 2 : 110. 1907, non Druce — *A. maritima* Linn.
ssp. *incana* (Kell.) Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad.
Sci. URSS 4(2) : 268. 1930. p. p. — *A. caspica* Kell. in Fl. S.-E. Eu-
rop. reg. USSR 6 : 356. 1936.

var. 1. *lerceanum*

USSR (C. & W.), Bulgaria, Romania.

var. 2. **astrochanicum** (Kazak.) Y. R. Ling comb. nov. — *Artemisia maritima*
var. *astrochanica* Kazak. in Mag. Exp. Agric. S.-E. 4 : 2. 1927. — *A.*
astrochanica Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 :
422. 1954.

USSR (C. Asia).

21. **Seriphidium scopiforme** (Ledeb.) Poljak. in Mat. Fl. Veg. Kaschg. 11 :
172. 1961. — *Artemisia scopaeformis* Ledeb. Fl. Ross. 2(2) : 575. 1844-46.
— *A. maritima* Linn. ssp. *kasakorum* Krasch. in Rep. Exped. Pedol.-Bot.
Kaschg. Acad. Sci. URSS 4(2) : 272. 1930. — *A. scopaeformis* Ledeb. f.
longiramosa Poljak. Fl. URSS 26 : 581. 1961.

China (E. & N. Xinjiang), USSR (C. Asia).

22. **Seriphidium halophilum** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11 :
172. 1961. — *Artemisia halophila* Krasch. in Rep. Exped. Pedol.-Bot. Ka-
schg. Acad. Sci. URSS 4(2) : 272. 1930.

var. 1. **halophilum**

USSR (C. Asia).

var. 2. **glabratum** (Filat.) Y. R. Ling comb. nov. — *Artemisia halophila*
Krasch. var. *glabrata* Filat. Fl. Kaschg. 9 : 117. 1966.

USSR (C. Asia).

23. **Seriphidium subsalsum** (Filat.) Bremer & Humphries comb. nov. —
Artemisia subsalsa Filat. in Nov. Syst. High. Pl. 18 : 222. 1981.

N. Iran, Afghanistan, Asia Minor, USSR (C. Asia).

24. **Seriphidium fedorovii** (Rzazad.) Y. R. Ling comb. nov. — *Artemisia*
fedorovii Rzazad. in Not. Acad. Sci. Azerb. SSR 3 : 24. 1955.

USSR (Azerb.).

Ser. 2. **Kaschgarica** Y. R. Ling in Bull. Bot. Res. 8(3) : 115. 1988.

25. **Seriphidium kaschgaricum** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 175. 1961. — *Artemisia kaschgarica* Krasch. in Act. Inst. Bot. Acad. Sci. URSS 1(3): 350. 1936.

var. 1. **kaschgaricum**

China (Xinjiang), USSR (C. Asia).

var. 2. **dshungaricum** (Filat.) Y. R. Ling in Bull. Bot. Res. 8(3): 116. 1988. — *Artemisia kaschgarica* Krasch. var. *dshungarica* Filat. Fl. Kaschg. 9: 128. 1966.

China (Xinjiang), USSR (C. Asia).

26. **Seriphidium fedtschenkoanum** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 175. 1961. — *Artemisia fedtschenkoana* Krasch. in Act. Inst. Bot. Acad. Sci. URSS 1(3): 315. 1936.

China (Xinjiang), USSR (C. Asia).

27. **Seriphidium issykkulense** (Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 173. 1961. — *Artemisia issykkulensis* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 17: 415. 1955. — *A. fedtschenkoana* Krasch. var. *issykkulensis* (Poljak.) Poljak. Fl. URSS 26: 601. 1961.

China (Xinjiang), USSR (C. Asia).

28. **Seriphidium cinum** (Berg. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 175. 1961. — *Artemisia cina* Berg. ex Poljak. in Act. Inst. Chem. Acad. Sci. Cauc. RSS 4: 69. 1959 & Fl. URSS 26: 601. 1961, incl. syn. — *A. maritima* Linn. f. *fragrans* Regel ex Poljak. Fl. URSS 26: 601. 1961, pro syn. — *A. cinoides* Pavl. ex poljak. l. c. 26: 603. 1961, pro syn.

China (cult. in N., N.-E. & N.-W.), USSR (C. Asia).

29. **Seriphidium mongoltavicum** (Poljak.) Y. R. Ling comb. nov. — *Artemisia cina* Berg. ex Poljak. var. *mongoltavica* Poljak. Fl. URSS 26: 603. 1961.

—*A. mongoliavica* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 17: 416. 1955.

USSR (C. Asia).

30. *Seriphidium brevifolium* (Wall. ex DC.) Ling & Y. R. Ling in Act. Phytotax. Sin. 18(4): 513. 1980. — *Artemisia brevifolia* Wall. ex DC. Prodr. 6: 103. 1837. — *A. maritima* Linn. vera C. B. Clarke, Comp. Ind. 159. 1878. — *A. maritima* auct., non Linn.: Hook. f. Fl. Brit. Ind. 3: 322. 1881. p. p.

China (W. Xizang), N. India, N. Pakistan, Kashmir.

31. *Seriphidium thomsonianum* (C. B. Clarke) Ling & Y. R. Ling in Act. Phytotax. Sin. 18(4): 513. 1980. — *Artemisia thomsonianum* C. B. Clarke, Comp. Ind. 160. 1878. — *A. maritima* auct., non Linn.: Hook. f. Fl. Brit. Ind. 3: 323. 1881. p. p. — *A. lehmaniana* auct. non Bge.: Hook. f. Fl. Brit. Ind. 3: 324. 1881, pro syn.

China (W. & N. Xizang), N. India, N. Pakistan, Kashmir, Afghanistan.

32. *Seriphidium aucheri* (Boiss.) Ling & Y. R. Ling in Act. Phytotax. Sin. 18(4): 513. 1980. — *Artemisia aucheri* Boiss. Fl. Or. 3: 367. 1875. — *A. maritima* Linn. var. *aucheri* (Boiss.) Pamp. in Nuov. Giorn. Bot. Ital. n. s. 34: 680. 1927. — *A. maritima* var. b. C. B. Clarke, Comp. Ind. 159. 1878.

China (W. & N. Xizang), N. Pakistan, Iran, Afghanistan.

Ser. 3. *Valida* (Poljak.) Y. R. Ling & C. J. Humphries in Bull. Bot. Res. 8 (3): 117. 1988. — *Artemisia*, Ser. *Validae* Poljak. Fl. URSS 26: 604. 1961.

33. *Seriphidium ferganense* (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 173. 1961. — *Artemisia ferganensis* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 409. 1954. — *A. oliveriana* auct., non Bess.: Gay in Nikyt. & Ubuk. Fl. Kirghiz. 11: 194. 1965.

China (Xinjiang), USSR (C. Asia).

34. **Seriphidium porrectum** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia porrecta* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 410. 1954.

USSR (Pamir-Alai).

35. **Seriphidium serotinum** (Bge.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia serotina* Bge. in Mem. Acad. Sci. Petersb. 7 : 341. 1854.

var. 1. **serotinum**

USSR (C. Asia).

var. 2. **maracandicum** (Bge.) Y. R. Ling comb. nov. — *Artemisia maracandica* Bge. l. c. 7 : 345. 1854. — *A. fragrans* Willd. var. *maracandica* Boiss. Fl. Or. 3 : 366. 1875.

USSR (C. Asia).

36. **Seriphidium fulvellum** (Filat. & Ladyg.) Bremer & Humphries comb. nov. — *Artemisia fulvella* Filat. & Ladyg. in Nov. Syst. Pl. Vasc. 18 : 227. 1981.

China (W. Xinjiang), USSR (Kirghiz.).

37. **Seriphidium validum** (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 174. 1961. — *Artemisia valida* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 398. 1954. — *A. sogdiana* auct., non Bge. : Bond. & Butk. Fl. Uzbek. 6 : 178. 1962. p. p.

USSR (C. Asia).

38. **Seriphidium gypsaceum** (Krasch., M. Pop. & Lincz. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia gypsacea* Krasch., M. Pop. & Lincz. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 409. 1954.

Iran, USSR (C. Asia).

39. *Seriphidium namanganicum* (Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961.—*Artemisia namanganica* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 18: 275. 1957.—*A. uzbekistanica* Poljak. l. c. 18: 277. 1957.—*A. sogdiana* auct., non Bge.: Bond. & Butk. Fl. Uzbek. 6: 178. 1962. p. p.

USSR (C. Asia).

Ser. 4. *Turanica* (Poljak.) Y. R. Ling transl. nov.—*Artemisia*, Ser. *Turanica* Poljak. Fl. URSS 26: 612. 1961.

40. *Seriphidium turanicum* (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 173. 1961.—*Artemisia turanica* Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2): 270. 1930.—*A. lamprocaulos* Rech. f. in Ann. Nat. Mus. Wien. 4: 270. 1947.

var. 1. *turanicum*

Afghanistan, Iran, USSR (C. Asia).

var. 2. *pallidum* (Poljak. & Krasch.) Y. R. Ling comb. nov.—*Artemisia pallida* Poljak. & Krasch. ex Beull. in Mag. Hort. Acad. Sci. URSS 6: 56. 1950.—*A. turanica* Krasch. var. *pallida* (Poljak. & Krasch.) Poljak. Fl. URSS 26: 613. 1961.—*A. terrae-albae* Krasch. var. *pallida* (Poljak. & Krasch.) Filat. Fl. Kaschg. 9: 121. 1966.

USSR (C. Asia).

41. *Seriphidium eremophilum* (Krasch. & Butk. ex Poljak.) Bremer & Humphries comb. nov.—*Artemisia eremophila* Krasch. & Butk. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 401. 1954.—*A. turanica* Krasch. var. *eremophila* (Krasch. & Butk. ex Poljak.) Poljak. Fl. URSS 26: 613. 1961.—*A. sogdiana* auct., non Bge.: Bond. & Butk. Fl. Uzbek. 6: 178. 1962.

USSR (C. Asia).

42. **Seriphidium diffusum** (Krasch. ex Poljak.) Y. R. Ling comb. nov. — *Artemisia diffusa* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 399. 1954. — *A. turanica* Krasch. var. *diffusa* Krasch. ex Poljak. Fl. URSS 26 : 613. 1961.

Afghanistan, USSR (C. Asia).

43. **Seriphidium kemrudicum** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia kemrudica* Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2) : 270. 1930. — *A. herba-alba* Asso ssp. *kemrudica* Krasch. ex Poljak. Fl. URSS 26 : 614. 1961, pro syn.

var. 1. **kemrudicum**

USSR (C. Asia).

var. 2. **karabugasicum** (Krasch.) Y. R. Ling comb. nov. — *Artemisia kemrudica* Krasch. ssp. *karabugasica* Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2) : 270. 1930.

USSR (C. Asia).

44. **Seriphidium scotinum** (Nevski) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 174. 1961. — *Artemisia scotina* Nevski in Act. Inst. Bot. Acad. Sci. URSS 1(4) : 284. 1937.

USSR (Pamir-Alai).

45. **Seriphidium kochiiforme** (Krasch. & Lincz. ex Poljak.) Poljak. in Mat. Fl. Veg. URSS 11 : 173. 1961. — *Artemisia kochiiformis* Krasch. & Lincz. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 411-412. 1954.

USSR (Pamir-Alai).

46. **Seriphidium sogdianum** (Bge.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia sogdiana* Bge. in Mem. Acad. Sci. Petersb. 7 : 343. 1854.

USSR (C. Asia).

47. **Seriphidium stenocephalum** (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 173. 1961. — *Artemisia stenocephala* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 404. 1954.

Afghanistan, USSR (C. Asia).

48. **Seriphidium kopetdaghense** (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. — *Artemisia kopetdaghensis* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 406. 1954.

USSR (C. Asia).

49. **Seriphidium balchanorum** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. — *Artemisia balchanora* Krasch. in Catal. Pl. Herb. Fl. URSS 10: 104-105. 1936.

USSR (C. Asia).

50. **Seriphidium turcomanicum** (Gand.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. — *Artemisia turcomanica* Gand. in Bull. Soc. Bot. Franc. 18: 38. 1918.

USSR (C. Asia).

51. **Seriphidium badhysi** (Krasch. & Lincz. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. — *Artemisia badhysi* Krasch. & Lincz. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 405. 1954. — *A. sogdiana* Bond. & Butk. Fl. Uzbek. 6: 178. 1962. p. p., quoad syn. *A. badhysi* Krasch. & Lincz. ex Poljak.

URSS (C. Asia).

52. **Seriphidium arenicolum** (Krasch. ex Poljak.) Y. R. Ling comb. nov. — *Artemisia arenicola* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 407. 1954. — *A. badhysi* Krasch. & Lincz. ex Poljak. var. *arenicola* (Krasch. ex Poljak.) Poljak. Fl. URSS 26: 619.

1961.

Afghanistan, Iran, USSR (C. Asia).

53. *Seriphidium prasinum* (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. — *Artemisia bucharia* Krasch. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 2: 188. 1921, nom. nud. — *A. prasina* Krasch. ex Poljak. l. c. 17: 413. 1955.

USSR (Pamir-Alai).

54. *Seriphidium spicigerum* (C. Koch) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. — *Artemisia spicigera* C. Koch in Linnaea 24: 345. 1841. — *A. macra* Boiss. & Haussk. in Boiss. Fl. Or. 3: 364. 1875. — *A. araxina* Tachkht. in Mag. Armen. SSR 2: 209. 1937. — *A. issaeva* Rzazad. in Not. Acad. Sci. Azerb. SSR 3: 23. 1955.

USSR (Caucasus).

55. *Seriphidium sieberi* (Bess.) Bremer & Humphries comb. nov. — *Artemisia sieberi* Bess. in Bull. Soc. Nat. Mosc. 9: 80. 1836. — *A. billardieriana* Bess. l. c. 9: 81. 1836. p. p. — *A. herba-alba* Asso var. *laxiflora* Boiss. Fl. Or. 3: 365. 1875. p. p. — *A. herba-alba* auct., non Asso: Muschl. Man. Fl. Egypt. 2: 1012. 1912. p. p. — *A. herba-alba* Asso ssp. *saxicola* Krasch. ex Poljak. Fl. URSS 26: 621. 1961. p. p.

W. Iran, Syria, Egypt, USSR (C. Asia).

56. *Seriphidium dumosum* (Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 175. 1961. — *Artemisia dumosa* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 425. 1954. — *A. sieberi* auct., non Bess.: Poljak. Fl. URSS 26: 621. 1961. p. p. — *A. herba-alba* Asso var. *laxiflora* Boiss. Fl. Or. 3: 365. 1875. p. p. — *A. inculta* Delile var. *laxiflora* (Boiss.) Tachk. Stud. Fl. Egypt ed. 2. 581. 1974.

Iran, USSR (C. Asia).

57. *Seriphidium oliverianum* (Gay ex Bess.) Bremer & Humphries comb. nov.

—*Artemisia oliveriana* Gay ex Bess. in Bull. Soc. Nat. Mosc. 9 : 77. 1836.
—*A. lippii* Jan ex Bess. l. c. 9 : 79. 1836. — *A. billardierana* Bess. l. c. 9 : 81. 1836. — *A. herba-alba* auct., non Asso : Boiss. Fl. Or. 3 : 365. 1875, incl. var. *densiflora* Boiss. — *Oligosporus lippi* (Jan ex Bess.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 170. 1961.

Afghanistan, Iran, Asia Minor, USSR (C. Asia), Spain, N. Africa.

58. **Seriphidium herba-album** (Asso) Y. R. Ling comb. nov. — *Artemisia herba-alba* Asso Syn. Stirp. Arag. 117. 1779.

Asia Minor, Spain, S. France, N.-W. Africa (Morocco).

59. **Seriphidium oranense** (Deb. ex Filat.) Y. R. Ling comb. nov. — *Artemisia oranensis* Deb. ex Filat. in Nov. Syst. Pl. Vas. 22 : 221. 1985.

N.-W. Africa (Algeria).

60. **Seriphidium algeriense** (Filat.) Y. R. Ling comb. nov. — *Artemisia algeriensis* Filat. in Nov. Syst. Pl. Vas. 22 : 222. 1985.

N.-W. Africa (Algeria).

61. **Seriphidium saharum** (Pomel) Y. R. Ling comb. nov. — *Artemisia sahara* Pomel in Nouv. Mat. Fl. Atl. 56. 1874. — *A. herba-alba* auct., non Asso : Yuez. & Sant. in Nouv. Fl. Alger. 2 : 989. 1874.

N.-W. Africa (Algeria & Tunisia).

62. **Seriphidium botschantzevii** (Filat.) Y. R. Ling comb. nov. — *Artemisia botschantzevii* Filat. in Nov. Syst. Pl. Vas. 22 : 216. 1985.

N.-W. Africa (Algeria).

63. **Seriphidium barrelieri** (Bess.) Y. R. Ling comb. nov. — *Artemisia barrelieri* Bess. in Bull. Soc. Nat. Mosc. 9 : 87. 1836.

Spain.

64. **Seriphidium poljakovii** (Filat.) Y. R. Ling comb. nov. — *Artemisia poljakovii* Filat. in Nov. Syst. Pl. Vas. 22 : 218. 1985.

N.-W. Africa (Algeria).

65. **Seriphidium densifolium** (Filat.) Y. R. Ling comb. nov. — *Artemisia densifolia* Filat. in Nov. Syst. Pl. Vas. 22 : 219. 1985.

N.-W. Africa (Algeria).

66. **Seriphidium incultum** (Delile) Y. R. Ling comb. nov. — *Artemisia inculta* Delile Fl. Egypt 120, t. 43—2. 1813 & Discr. Egypt. 19 : 345. 1824. — *A. lippi* Jan ex Bess. in Bull. Soc. Nat. Mosc. 9 : 79. 1836. P. P. — *A. herba-alba* auct., non Asso : Muschl. Man. Fl. Egypt 2 : 1012. 1912.

Pen. Arab., N. & N.-E. Africa (Egypt & Libya).

Ser. 5. **Lessingiana** (Poljak.) Y. R. Ling transl. nov. — *Artemisia*, Ser. *Lessingianae* Poljak. Fl. URSS 26 : 593. 1961.

67. **Seriphidium lessingianum** (Bess.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia lessingiana* Bess. in Linnaea 15 : 90, 103. 1841. — *A. taurica* auct., non Willd. : Less. in Linnaea 9 : 170, 190. 1834. — *A. lessingiana* Bess. f. *canescens* Krasch. ex Poljak. Fl. URSS 26 : 594. 1961.

USSR (C. Asia).

68. **Seriphidium aralense** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia aralensis* Krasch. in Catal. Pl. Herb. Fl. URSS 10 : 105. 1936.

USSR (C. Asia).

69. **Seriphidium camelorum** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *Artemisia camelorum* Krasch. in Rep. Exped. Pedol.-Bot.

Kaschg. Acad. Sci. URSS 4(2) : 272. 1930.

USSR (C. Asia).

Ser. 6. **Pauciflora** (Poljak.) Y. R. Ling & C. J. Humphries in Bull. Bot. Res. 8(3) : 118. 1988. — *Artemisia*, Ser. *Pauciflorae* Poljak. Fl. URSS 26 : 589. 1961.

70. **Seriphidium pauciflorum** (Web. ex Stechm.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia pauciflora* Web. ex Stechm. Dissert. Artem. 26. 1775. — *A. maritima* Linn. var. *stechmanniana* Bess. in Bull. Soc. Nat. Mosc. 7 : 31. 1834. — *A. maritima* Linn. var. *pauciflora* Ledeb. Fl. Ross. 2(2) : 570. 1844-46.

var. 1. **pauciflorum**

Mongolia, USSR (C. & W.).

var. 2. **maikarum** (Krasch.) Y. R. Ling comb. nov. — *Artemisia pauciflora* Web. ex Stechm. ssp. *maikara* Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2) : 273. 1930. — *A. maikara* (Krasch.) Pavl. Fl. Centr. Kaschg. 3 : 270. 1938. — *A. pauciflora* Web. ex Stechm. f. *maikara* (Krasch.) Poljak. Fl. URSS 26 : 590. 1961.

USSR (C. & W.).

71. **Seriphidium gracilescens** (Krasch. & Iljin) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia gracilescens* Krasch. & Iljin in Animadv. Syst. Herb. Univ. Tomsk. 1-2 : 2. 1949. — *A. lercheana* Ledeb. Fl. Alt. 4 : 85. 1833. p. p., quoad pl. Songor. — *A. pauciflora* auct., non Web. ex Stechm. : Kryl. Fl. Alt. 3 : 638. 1904.

China (N.-W.), Mongolia, USSR (C. Asia).

72. **Seriphidium terrae-albae** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia terrae-albae* Krasch. in Rep. Exped. Pedol.-Bot. Kaschg. Acad. Sci. URSS 4(2) : 269. 1930. — *A. maritima* Linn. ssp. *terrae-albae* Krasch. in Animadv. Syst. Herb. Gen. Bot. Gard. 2 : 187. 1921.

—*A. caspica* Kell. in Fl. S.-E. Europ. reg. USSR 6: 356. 1936. p. p.

var. 1. **terrae-albae**

China (Xinjiang), Mongolia, USSR (C. Asia).

var. 2. **suaveolens** (Poljak.) Y. R. Ling comb. nov. — *Artemisia suaveolens* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 18: 274. 1957. — *A. terrae-albae* krasch. var. *suaveolens* (Poljak.) Poljak. Fl. URSS 26: 593. 1961.

USSR (C. Asia).

var. 3. **massagetovii** (Krasch.) Y. R. Ling comb. nov. — *Artemisia terrae-albae* Krasch. var. *massagetovii* Krasch. in Kryl. Fl. Sibir. Occ. 11: 787. 1949.

USSR (C. Asia).

var. 4. **kurdaicum** (Poljak.) Y. R. Ling comb. nov. — *Artemisia terrae-albae* Krasch. var. *kurdaica* Poljak. Fl. URSS 26: 593. 1961.

USSR (C. Asia).

73. **Seriphidium semiaridum** (Krasch. & Lavr.) Ling & Y. R. Ling in Bull. Bot. Res. 8(3): 118. 1988. — *Artemisia terrae-albae* krasch. ssp. *semiarida* Krasch. & Lavr. in Kryl. Fl. Sibir. Occ. 11: 2787. 1949. — *A. terrae-albae* Krasch. var. *semiarida* (Krasch. & Lavr.) Poljak. Fl. URSS 26: 592. 1961. — *A. semiarida* (Krasch. & Lavr.) Filat. Fl. Kaschg. 9: 121. 1966.

China (Xinjiang), USSR (C. Asia).

74. **Seriphidium heptapotamicum** (Poljak.) Ling & Y. R. Ling in Bull. Bot. Res. 8(3): 119. 1988. — *Artemisia heptapotamica* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 18: 278. 1957. — *A. terrae-albae* Krasch. var. *heptapotamica* (Poljak.) Poljak. Fl. URSS 26: 593. 1961.

*China (Xinjiang), USSR (C. Asia).

75. **Seriphidium nigricans** (Filat. & Ladyg.) Bremer & Humphries comb. nov. — *Artemisia nigricans* Filat. & Ladyg. in Nov. Syst. Pl. Vas. 19: 176, 180. 1982.

USSR (Pamir-Alai).

Ser. 7. **Sublessingiana** (Poljak.) Y. R. Ling & C. J. Humphries in Bull. Bot. Res. 8(3): 119. 1988. — *Artemisia*, Ser. *Sublessingianae* Poljak. Fl. URSS 26: 597. 1961.

76. **Seriphidium sublessingianum** (Kell.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. — *Artemisia maritima* Linn. var. *sublessingiana* Kell. in Bot.-Geogr. Mag. 2: 89-93. 1912. nomen. — *A. sublessingiana* (Kell.) Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 395. 1954. — *A. lessingiana* auct., non Bess.: Kryl. Fl. Alt. 3: 64. 1904.

var. 1. **sublessingianum**

China (Xinjiang), Mongolia, USSR (C. Asia).

var. 2. **coarctatum** (Filat.) Y. R. Ling comb. nov. — *Artemisia sublessingiana* (Kell.) Krasch. ex Poljak. var. *coarctata* Filat. Fl. Kaschg. 9: 131. 1966.

USSR (C. Asia).

77. **Seriphidium gorjaevii** (Poljak.) Y. R. Ling comb. nov. — *Artemisia gorjaevii* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 419. 1954. — *A. sublessingiana* (Kell.) Krasch. ex Poljak. var. *gorjaevii* (Poljak.) Poljak. Fl. URSS 26: 596. 1961.

USSR (C. Asia).

78. **Seriphidium polystichum** (Poljak.) Y. R. Ling comb. nov. — *Artemisia polysticha* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 42. 1954. — *A. sublessingiana* (Kell.) Krasch. ex Poljak. var. *polystichum* (Poljak.) Poljak. Fl. URSS 26: 597. 1961.

USSR (C. Asia).

79. **Seriphidium subchrysolepis** (Filat.) Bremer & Humphries comb. nov.
—*Artemisia subchrysolepis* Filat. in Nov. Syst. Pl. Vasc. 18: 224. 1981.

China (W. Xinjiang), USSR (C. Asia).

80. **Seriphidium tenuisectum** (Nevski) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. —*Artemisia tenuisecta* Nevski in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 1(4): 284. 1937.

China (Xinjiang), USSR (C. Asia).

81. **Seriphidium glaucinum** (Krasch. ex Poljak.) Bremer & Humphries comb. nov. —*Artemisia glaucina* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 412. 1954. —*A. tenuisecta* Nevski var. *glaucina* (Krasch. ex Poljak.) Poljak. Fl. URSS 26: 599. 1961.

USSR (C. Asia).

82. **Seriphidium mucronulatum** (Poljak.) Y. R. Ling comb. nov. —*Artemisia mucronulata* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 418. 1954. —*A. tenuisecta* Nevski var. *mucronulata* Poljak.) Poljak. Fl. URSS 26: 599. 1961.

USSR (C. Asia).

83. **Seriphidium amoenum** (Poljak.) Poljak. in Mat. Fl. Pl. Kaschg. 11: 174. 1961. —*Artemisia amoena* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 421. 1959.

China (Xinjiang), USSR (C. Asia).

84. **Seriphidium ciniforme** (Krasch. & M. Pop. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11: 174. 1961. —*Artemisia ciniformis* Krasch. & M. Pop. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16: 403. 1954.

USSR (C. Asia).

85. **Seriphidium glanduligerum** (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kraschg. 11 : 174. 1961. — *Artemisia glanduligera* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 402. 1954.

USSR (Pamir-Alai).

Ser. 8. **Santolina** (Poljak.) Y. R. Ling & C. J. Humphries in Bull. Bot. Res. 8(3) : 119. 1988. — *Artemisia*, Ser. *Santolinae* Poljak. Fl. URSS 26 : 624. 1961.

86. **Seriphidium santolinum** (Schrenk) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 173. 1961. — *S. lobulifolium* (Boiss.) Poljak. l. c. 11 : 172. 1961. — *Artemisia santolina* Schrenk in Bull. Phys. Math. Acad. Sci. Petersb. 3 (7) : 106. 1845. — *A. lobulifolia* Boiss. Fl. Or. 3 : 364. 1875.

var. 1. **santolinum**

China (Xinjiang), Afghanistan, Iran, USSR (C. Asia).

var. 2. **simplicifolium** (Poljak.) Y. R. Ling comb. nov. — *Artemisia santolina* Schrenk f. *simplicifolia* Poljak. Fl. URSS 26 : 625. 1961.

USSR (C. Asia).

var. 3. **desertum** (Filat.) Y. R. Ling comb. nov. — *Artemisia santolina* Schrenk var. *deserta* Filat. Fl. Kaschg. 9 : 115. 1966.

USSR (C. Asia).

87. **Seriphidium caerulescens** (Linn.) Bremer & Humphries comb. nov. — *Artemisia caerulescens* Linn. Sp. Pl. 2 : 848. 1753.

var. 1. **caerulescens** — *Artemisia caerulescens* Linn. ssp. *caerulescens* Tutin & al. Fl. Europ. 4 : 181. 1976.

C. Italy, S. Portugal, S.-W. Spain, France (Corsica), Albania.

var. 2. *latifolium* (DC.) Y. R. Ling comb. nov. — *Artemisia caerulescens* Linn. var. *latifolia* DC. Prodr. 6 : 100. 1837.

Yugoslavia (Dalmatia), France (Corsica).

var. 3. *spipontinum* (Ten.) Y. R. Ling comb. nov. — *Artemisia spipontina* Ten. ined. (*6).

(*6). also syn. *Artemisia caerulescens* Linn. ssp. *spipontina* Krasch.

Europe (W.).

var. 4. *gallicum* (Willd.) Y. R. Ling comb. nov. — *Artemisia gallica* Willd. Sp. Pl. 3 : 1834. 1800. — *A. caerulescens* Linn. ssp. *gallica* (Willd.) K. Pers. Op. Bot. (Lund) 35 : 173. 1974.

Europe (W.).

Ser. 9. *Knorringiana* (Poljak.) Y. R. Ling transl. nov. — *Artemisia*, Ser. *Knorringianae* Poljak. Fl. URSS 26 : 588. 1961.

88. *Seriphidium knorringianum* (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia knorringiana* Krasch. in Mag. Bot. Hort. URSS 14(4-6) : 463. 1914.

USSR (Pamir-Alai).

89. *Seriphidium korovinii* (Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia korovinii* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 17 : 279. 1957.

China (W. Xinjiang), USSR (Pamir-Alai).

90. *Seriphidium grenardii* (Franch.) Y. R. Ling & C. J. Humphries in Bull. Bot. Res. 8(3) : 121. 1988. — *Artemisia grenardii* Franch. in Bull. Mus. Hist. Nat. Paris 3 : 323. 1897.

China (S. Xinjiang — N. Xizang).

Ser. 10. **Compacta** (Poljak.) Y. R. Ling & C. J. Humphries in Bull. Bot. Res. 8(3) : 121. 1988. — *Artemisia*, Ser. *Compactae* Poljak. Fl. URSS 26 : 585. 1961.

91. **Seriphidium compactum** (Fisch. ex DC.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia compacta* Fisch. ex Bess. in Bull. Soc. Nat. Mosc. 7 : 34. 1835, pro syn. — *A. albida* Ledeb. Fl. Alt. 4 : 85. 1833. p. p. — *A. maritima* Linn. var. *fischeriana* Bess., var. *stephaniana* Bess. var. *helmiana* Bess. & var. *gmeliniana* Bess. l. c. 7 : 34-38. 1834. — *A. maritima* auct., non Linn. : Ledeb. Fl. Alt. 4 : 84. 1833. p. p. — *A. maritima* Linn. var. *compacta* (Fisch. ex Bess.) Ledeb. Fl. Ross. 2(2) : 572. 1844-46.

China (N.-W.), Mongolia, USSR (C. Asia).

92. **Seriphidium tianshanicum** (Krasch.) Y. R. Ling comb. nov. — *Artemisia tianschanica* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 416. 1954. — *A. compacta* auct., non Fisch. ex DC. : Poljak. Fl. URSS 26 : 585. 1961. p. p.

USSR (C. Asia).

93. **Seriphidium rhodanthum** (Rupr.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia rhodantha* Rupr. in Mem. Acad. Sci. Petersb. 7, 14(4) : 52. 1869.

China (W. Xinjiang), USSR (C. Asia).

94. **Seriphidium borotalense** (Poljak.) Ling & Y. R. Ling in Bull. Bot. Res. 8(3) : 120. 1988. — *Artemisia borotalensis* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 425. 1954.

China (N. Xinjiang).

95. **Seriphidium elongatum** (Filat. & Ladyg.) Bremer & Humphries comb. nov. — *Artemisia elongata* Filat. & Ladyg. in Nov. Syst. Pl. Vasc. 18 : 225. 1981.

China (Xinjiang), USSR (C. Asia).

96. *Seriphidium proluxum* (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia proluxa* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 401. 1961.

USSR (C. Asia).

97. *Seriphidium dubjanskyanum* (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia dubjanskyana* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 397. 1954.

USSR (Pamir-Alai).

Ser. 11. *Lehmanniana* (Poljak.) Y. R. Ling transl. nov. — *Artemisia* Ser. *Lehmannianae* Poljak. Fl. URSS 26 : 622. 1961.

98. *Seriphidium lehmannianum* (Bge.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia lehmanniana* Bge. in Mem. Acad. Sci. Petersb. 7 : 340. 1854.

China (N.-W. Prov. & Xizang), Afghanistan, USSR (C. Asia).

99. *Seriphidium skorniakovii* (C. Winkl.) Bremer & Humphries comb. nov. — *Artemisia skorniakovii* C. Winkl. in Act. Hort. Petrop. 11 : 331. 1890. — *A. lehmanniana* Bge. var. *skorniakovii* (C. Winkl.) Poljak. Fl. URSS 26 : 622. 1961.

China (Xizang), USSR (C. Asia).

100. *Seriphidium korshinskyi* (Krasch. ex Poljak.) Y. R. Ling comb. nov. — *Artemisia korshinskyi* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 415. 1954. — *A. lehmanniana* Bge. var. *korshinskyi* (Krasch. ex Poljak.) Poljak. Fl. URSS 26 : 623. 1961.

Afghanistan, USSR (Pamir-Alai).

101. *Seriphidium leucotrichum* (Krasch. ex Ladyg.) Bremer & Humphries comb. nov. — *Artemisia leucotricha* Krasch. ex Ladyg. in Nov. Syst. Pl. Vas. 246. 1965. — *A. lehmanniana* ssp. *leucotricha* Krasch. ex Poljak.

Fl. URSS 26 : 622. 1961. pro syn.

N. Afghanistan, USSR (Pamir-Alai).

102. **Seriphidium vachanicum** (Krasch. ex Poljak.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia vachanica* Krasch. ex Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 413. 1954.

N. Afghanistan, USSR (Pamir-Alai).

103. **Seriphidium baldshuanicum** (Krasch. ex Zapr.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 174. 1961. — *Artemisia baldshuanica* Krasch. & Zapr. in Act. Inst. Bot. Acad. Sci. URSS 1(3) : 351. 1937.

USSR (C. Asia).

Ser. 12. **Leucodes** (Poljak.) Y. R. Ling transl. nov. — *Artemisia*, Ser. *Leucodes* Poljak. Fl. URSS 26 : 630. 1961.

104. **Seriphidium leucodes** (Schrenk) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia leucodes* Schrenk in Bull. Phys. Math. Acad. Sci. Petersb. 3 : 106.-107. 1845.

USSR (C. Asia).

Ser. 13. **Tridentata** (Poljak.) Y. R. Ling transl. nov. — *Artemisia*, Ser. *Tridentatae* Poljak. Fl. URSS 26 : 626. 1961.

105. **Seriphidium deserti** (Krasch.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 172. 1961. — *Artemisia deserti* Krasch. in Catal. Pl. Herb. Fl. URSS 10 : 106. 1936.

USSR (C. Asia).

Sect. 2. **Minchünensa** Y. R. Ling in Bull. Bot. Res. 8(3) : 122. 1988.

Leaves 1—3 pinnate-sectioned, segments small serrated and nearly pectinate. Capitula in paniculate inflorescences.

One species. Distributed in China (Gansu).

Ser. 1. *Minchūnensis*

106. *S. minchūnense* Ling & Y. R. Ling in Bull. Bot. Res. 5(3) : 159. 1985. — *Artemisia minchūensis* Y. R. Ling l. c. 5(3) : 159. 1985, pro syn.

China (N. Gansu).

Sect. 3. *Juncea* (Poljak.) Y. R. Ling & C. J. Humphries in Bull. Bot. Res. 8(3) : 122. 1988. — *Artemisia*, Sect. *Junceum* Poljak. Fl. URSS 26 : 626. 1961.

Leaves 1—2 palmately sectioned, segments linear. Capitula in paniculate inflorescences.

One species and one variety. Distributed in China (Xinjiang) and USSR (C. Asia).

Ser. 1. *Juncea* — *Artemisia*, Ser. *Appressopilosae* Poljak. Fl. URSS 26 : 629. 1961.

107. *Seriphidium junceum* (Kar. & Kir.) Poljak. in Mat. Fl. Veg. Kaschg. 11 : 175. 1961. — *Artemisia juncea* Kar. & Kir. in Bull. Soc. Nat. Mosc. 15 : 383. 1842. — *A. multifida* Kar. & Kir. ex Poljak. Fl. URSS 26 : 629. 1961, pro syn.

var. 1. *junceum*

China (Xinjiang), USSR (C. Asia).

var. 2 *macrosciadium* (Poljak.) Ling & Y. R. Ling in Bull. Bot. Res. 8(3) : 123. 1988. — *Artemisia macrosciadia* Poljak. in Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS 16 : 423. 1954. — *A. juncea* Kar. & Kir. var. *macrosciadia* (Poljak.) Poljak. Fl. URSS 26 : 629. 1961.

China (Xinjiang), USSR (C. Asia).

The Floristic Geography of *Seriphidium* (Bess.) Poljak. in the Old

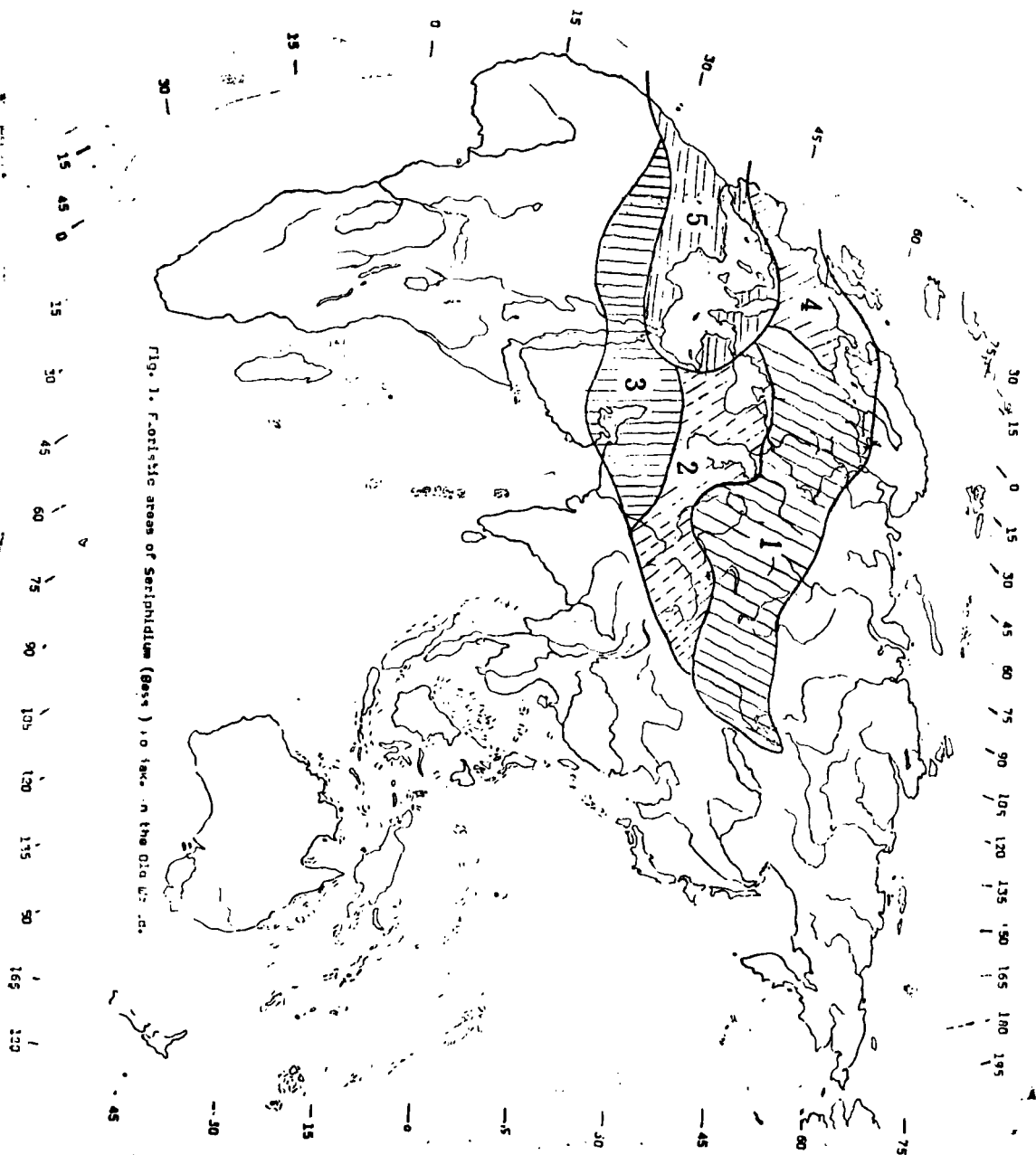


Fig. 1. Floristic areas of *Seriphidium* (Bess.) Poljak, in the Old World.

1. Eurasia steppe or semidesert-steppe subkingdom.
2. Asia desert (C. Asia—W. Asia) (the Ancient Mediterranean) subkingdom.
3. S.-W. Asia—Arab—Africa tropical desert and savanna subkingdom.
4. West and Central European steppe and forest-steppe subkingdom.
5. S. Europe—the Mediterranean—W. & N.-W. African savanna subkingdom.

World (Fig. 1.).

The ancestor of *Seriphidium* (Bess.) Poljak. perhaps derived from that of *Artemisia* Linn., near the primitive centre of speciation of *Artemisia* Linn., but onto the drought area in Tertiary Age. Now it's distributed in C. & W. Asia, Europe, N. Africa and the Centre of N. America. However, the present mass distributional centre is at the steppe and desert circumstances between C. Asia of USSR and Xinjiang of China. The border of the distribution in the Old World have extended to Sibiria of USSR, Mongolia, N., N.-W. Provinces and W. Xizang of China, N. India, N. Pakistan, Minor Asia and N., N.-E. & N.-W. Africa. Besides, another one of small mass distributional centre is in the Centre of N. America.

The Regionazations of the Floristic Geography of *Seriphidium* (Bess.) Poljak. in the Old World can be summarized as follows (Tab. 1.):

1. Eurasia steppe or semidesert-steppe subkingdom. The area is included the countries in E., a part of N. & C. Europe, W. Sibiria & C. Asia of USSR, N. & N.-W. China and W. & C. Mongolia. It is the pure or drought steppe and semidesert-steppe circumstances. The species of *Seriphidium* (Bess.) Poljak. would derive from the primitive centre of speciation and develop spreadly in Tertiary and Quaternary Ages, and now there become the present distributional mass centre.

1). C. Asia (East)—Mongolia (West) steppe or semidesert steppe region: That is the steppe or semidesert-steppe vegetation area. The species of the genus are the dominant or subdominant element in the vegetation, as the species, *S. schrenkianum* (Ledeb.) Poljak., *S. transiliense* (Poljak.) Poljak., *S. nitrosum* (Web. ex Stechm.) Poljak., *S. finitum* (Kitag.) Ling & Y. R. Ling, *S. mongolorum* (Krasch.) Ling & Y. R. Ling, *S. karatavicum* (Krasch. & Abol. ex Poljak.) Ling & Y. R. Ling, *S. assurgens* (Filat.) Bremer & Humphries, *S. kaschgaricum* (Krasch.) Poljak., *S. fedtschenkoanum* (Krasch.) Poljak., *S. issykkulense* (Poljak.) Poljak., *S. cinum* (Berg. ex Poljak.) Poljak., *S. ferganense* (Krasch. ex Poljak.) Poljak., *S. serotinum* (Bge.) Poljak., *S. gracilescens* (Krasch. & Iljin) Poljak., *S. tenuisectum* (Nevski) Poljak., *S. glaucinum* (Krasch. ex Poljak.) Bremer & Humphries, *S. mucronulatum* (Poljak.) Y. R. Ling, *S. compactum* (Fisch. ex DC.) Poljak., *S. tianshanicum* (Krasch.) Y. R. Ling, *S. borotalense* (Poljak.) Ling

& Y. R. Ling, *S. elongatum* (Filat. & Ladyg.) Bremer & Humphries, *S. prolixum* (Krasch. ex Poljak.) Poljak. etc. The regional endemic species include *S. aralense* (Krasch.) Poljak. and *S. camelorum* (Krasch.) Poljak. in C. Asia of USSR, and *S. minchunense* Ling & Y. R. Ling at Gansu of China.

2). W. Sibiria—E. Europe steppe region: That is the pure steppe or with a little forest-steppe vegetation area. The representations, there, are *S. nutans* (Willd.) Bremer & Humphries, *S. lessingianum* (Bess.) Poljak. and *S. tauricum* (Willd.) Poljak. etc.

2. Asia desert (C. Asia—W. Asia) (the Ancient Mediterranean) subkingdom. That is the area of islet distribution at C. Asia of USSR, Xinjiang of China, a part of Mongolia, and a part of the countries in W. Asia. The species of the genus, distributed there, would be the typical drought (-cold) -resistant species with combating the drought or cold-drought circumstances, and now those become the dominant or subdominant element in desert or semidesert vegetation there.

3). C. Asia—W. Asia desert region: That is the temperate desert region. The species of the genus, there, would be the dominant or subdominant element in the vegetation. *S. saissanicum* (Krasch.) Bremer & Humphries, *S. scopiforme* (Ledeb.) Poljak., *S. halophilum* (Krasch.) Poljak., *S. subsalsum* (Filat.) Bremer & Humphries, *S. mongoltavicum* (Poljak.) Y. R. Ling, *S. validum* (Krasch. ex Poljak.) Poljak., *S. gypsaceum* (Krasch., M. Pop. & Lincz. ex Poljak.) Poljak., *S. namanganicum* (Poljak.) Poljak., *S. turanicum* (Krasch.) Poljak., *S. eremophilum* (Krasch. & Butk. ex Poljak.) Bremer & Humphries, *S. diffusum* (Krasch. ex Poljak.) Y. R. Ling, *S. kemrudicum* (Krasch.) Poljak., *S. dumosum* (Poljak.) Poljak., *S. heptapotamicum* (Poljak.) Ling & Y. R. Ling, *S. semiaridum* (Krasch. & Lavr.) Ling & Y. R. Ling, *S. sogdianum* (Bge.) Poljak., *S. stenoccephalum* (Krasch. ex Poljak.) Poljak., *S. kopetdaghense* (Krasch. ex Poljak.) Poljak., *S. balchanorum* (Krasch.) Poljak., *S. turcomanicum* (Gand.) Poljak., *S. badhysi* (Krasch. & Lincz. ex Poljak.) Poljak., *S. arenicolum* (Krasch. ex Poljak.) Y. R. Ling, *S. gorjaevii* (Poljak.) Y. R. Ling, *S. polystichum* (Poljak.) Y. R. Ling, *S. terrae-albae* (Krasch.) Poljak., *S. sublessingiana* (Kell.) Poljak., *S. pauciflorum* (Krasch.) Bremer & Humphries, *S. sawanense* Y. R. Ling & C. J. Humphries, *S. subchrysolepis* (Filat.) Bremer

& Humphries, *S. amoenum* (Poljak.) Poljak., *S. ciniforme* (Krasch. & M. Pop. ex Poljak.) Poljak., *S. santolinum* (Schrenk) Poljak., *S. baldshuanicum* (Krasch. ex Zapr.) Poljak., *S. deserti* (Krasch.) Poljak., *S. leucodes* (Schrenk) Poljak. and *S. junceum* (Kar. & Kir.) Poljak. etc. are the representations.

4). Pamir, Alai—W. Kulum, W. Himalaya region : That's the plateau and cold-desert area. The species of the genus are the subdominant or regional element there, as in *S. brevifolium* (Wall. ex DC.) Ling & Y. R. Ling, *S. aucheri* (Boiss.) Ling & Y. R. Ling, *S. kurramense* (Qazilb.) Y. R. Ling, *S. thomsonianum* (C. B. Clarke) Ling & Y. R. Ling, *S. porrectum* (Krasch.) Poljak., *S. fulvellum* (Filat. & Ladyg.) Bremer & Humphries, *S. scotinum* (Nevski) Poljak., *S. kochiiforme* (Krasch. & Lincz. ex Poljak.) Poljak., *S. prasinum* (Krasch. ex Poljak.) Poljak., *S. nigricans* (Filat. & Ladyg.) Bremer & Humphries, *S. glanduligerum* (Krasch. ex Poljak.) Poljak., *S. knorringianum* (Krasch.) Poljak., *S. korovinii* (Poljak.) Poljak., *S. rhodanthum* (Rupr.) Poljak., *S. dubjanskyanum* (Krasch. ex Poljak.) Poljak., *S. lehmannianum* (Bge.) Poljak., *S. skorniakovii* (C. Winkl.) Bremer & Humphries, *S. korshinskyi* (Krasch. ex Poljak.) Y. R. Ling, *S. leucotrichum* (Krasch. ex Ladyg.) Bremer & Humphries, *S. vachanicum* (Krasch. ex Poljak.) Poljak. and *S. grenardii* (Franch.) Y. R. Ling & C. J. Humphries etc.

5). Caucasus exchange-convergence region : That's an exchange-convergence area among the Eurasia steppe, Asia desert and S. Europe — the Mediterranean, as well as S.-W. Asia—Arab — African tropical desert and savanna areas. But the species of *Seriphidium* (Bess.) Poljak. would be the regional endemic species, such as *S. szowitzianum* Poljak., *S. fragrans* (Willd.) Poljak. (Caucasus of USSR and Iran), *S. gurganicum* (Krasch.) Bremer & Humphries (Turkmenya), *S. dzevanovskyi* (Leonova) Bremer & Humphries (Krym), *S. spicigerum* (C. Koch) Poljak. (Caucasus) and *S. fedorovii* (Rzazad.) Y. R. Ling (Azerbaijan) etc.

3. S.-W. Asia — Arab—Africa tropical desert and savanna subkingdom. That's a tropical desert, but with a part of savanna vegetation, located at S.-W. Asia, Arab Peninsula and N. & E. Africa, as well as a part of the Islands in the E. Mediterranean.

6). S.-W. Asia—Arab—N. & N.-E. Africa desert and savanna region : That's the tropical desert area, but mixed a part of savanna vegetation. *S. oliverianum* (Bess.) Bremer & Humphries, *S. herba-album* (Asso) Y. R. Ling, *S. incultum* (Delile) Y. R. Ling, *S. sieberi* (Bess.) Bremer & Humphries, *S. oranense* (Deb. ex Filat.) Y. R. Ling, *S. algeriense* (Filat.) Y. R. Ling, *S. saharum* (Pomel) Y. R. Ling, *S. botschantzevii* (Filat.) Y. R. Ling, *S. poljakovii* (Filat.) Y. R. Ling, and *S. densifolium* (Filat.) Y. R. Ling etc. represent at the region.

**Tab. 1. The accounts of the species of *Seriphidium* (Bess.)
Poljak. in the Old World.**

Subkingdoms	Regions	species
1. Eurasia steppe or semi-desert-steppe subkingdom	1). C. Asia (East)—Mongolia (West) steppe or semidesert-steppe region	25
	2). W. Sibiria—E. Europe steppe region	3
2. Asia desert (C. Asia—W. Asia) subkingdom	3). C. Asia—W. Asia desert region	36
	4). Pamir, Alai—W. Kulum, W. Himalaya region	21
	5). Caucasus exchange-convergence region	6
3. S.-W. Asia—Arab—Africa tropical desert and savanna subkingdom	6). S.-W. Asia—Arab—N. & N.-E. Africa desert and savanna region	10
4. West and Central European steppe and forest-steppe subkingdom	7). West and Central European plain steppe and forest-steppe region	4
5. S. Europe—the Mediterranean—W. & N.-W. Africa savanna subkingdom	8). S. Europe—the Mediterranean—W. & N.-W. Africa savanna region	2
Totals		107

4. West and Central European steppe and forest-steppe subkingdom. That's the pure steppe or forest-steppe area in W. & C. Europe.

7). West and Central European plain steppe and forest-steppe region : That's the area with "semi-drought" and "semi-moist" circumstances. *S.*

santonicum (Linn.) Bremer, *S. maritimum* (Linn.) Poljak., *S. valesianum* (Lam.) Y. R. Ling & C. J. Humphries and *S. lercheanum* (Web. ex Stechm.) Poljak. are the representations there.

5. *S. Europe*—the Mediterranean — W. & N.-W. African savanna subkingdom. That locates at *S. Europe*, the Mediterranean islands, W. & N.-W. Africa and Islands in S.-E. Atlantic Ocean. It's a savanna or shrubby vegetation with green leaves in the Winter.

8). *S. Europe*—the Mediterranean—W. & N.-W. African savanna region : *S. barrelieri* (Bess.) Y. R. Ling and *S. caerulescens* (Linn.) Bremer & Humphries etc. are found at the savanna vegetation.

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Supplement

- Seriphidium chitralense* (D. Podlech) Y. R. Ling comb. nov. — *Artemisia chitralensis* D. Podlech in Fl. Iran. 158: 198. 1986. Pakistan, Afghanistan.
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